can be any available media that can be accessed by the system **700**. By way of example, and not limitation, computer readable media may comprise computer storage media and communication media. Computer storage media includes volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information such as computer readable instructions, data structures, program modules or other data. Computer storage media includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can be accessed by the computer **100**.

Communication media typically embodies computer readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. The term "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media includes wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, RF, infrared and other wireless media. Combinations of any of the above should also be included within the scope of computer readable media.

While the above embodiments of the present invention describe a processing system for altering an image displayed to a user, one skilled in the art will recognize that the various computing architectures may be used to implement the present invention as recited within the attached claims. It is to be understood that other embodiments may be utilized and operational changes may be made without departing from the scope of the present invention.

The foregoing description of the exemplary embodiments of the invention has been presented for the purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in light of the above teaching. It is intended that the scope of the invention be limited not with this detailed description, but rather by the claims appended hereto. Thus the present invention is presently embodied as a method, apparatus, computer storage medium or propagated signal containing a computer program for providing a method, apparatus, and article of manufacture for altering an image displayed to a user based upon the proximity of the user to the display device.

What is claimed is:

1. A method for altering a computer generated image of an object displayed upon a display device, the display device having a display device orientation measurement module including a tilt sensor for obtaining a measure of a spatial orientation of the display device in at least two dimensions, and a Holosim processing module for applying an oblique projection matrix to all visible points on the object to generate the computer generated image of the object, the method comprising:

obtaining a set of orientation measurements for the display device from the display device orientation measurement module;

pre-processing the orientation measurements using a microcontroller processing module before transmission to a hand-held processing module;

generating a transformation matrix using the set of orientation measurements for use in generating the computer generated image of an object; and

applying the transformation matrix to all visible points within the computer generated image of an object.

2. The method according to claim **1**, wherein the display device orientation measurement module transmits the orientation measurements to the hand-held processing module over a serial communications link.

3. A computer program data product readable by a computing system and encoding a set of computer instructions implementing a method for altering a computer generated image of an abject displayed upon a display device, the display device having a display device orientation measurement module for obtaining a measure of a spatial orientation of the display device, and a Holosim processing module for applying an oblique projection matrix to all visible points on the object to generate the computer generated image of the object, the method comprising:

obtaining a set of orientation measurements for the display device from the display device orientation measurement module;

pre-processing the orientation measurements using a microcontroller processing module before transmission to a hand-held processing module;

generating a transformation matrix using the set of orientation measurements for use in generating the computer generated image of an object;

applying the transformation matrix to all visible points within the computer generated image of an object.

4. The computer program data product according to claim **3**, wherein the display device orientation measurement module comprises a tilt sensor for measuring the spatial orientation of the display device in at least two dimensions.

5. The computer program data product according to claim **3**, wherein the display device orientation measurement module transmits the orientation measurements to the hand-held processing module over a serial communications link.

6. The computer program data product according to claim **3**, wherein the computer program data product comprises a computer readable storage medium.

7. The computer program data product according to claim **3**, wherein computer program data product comprises a readable data stream encoded and superimposed upon a carrier wave for transmission between comprising systems.

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